AMENDMENTS TO THE CLAIMS

Please amend the claims of the application as follows:

1. **[Canceled]**
2. **[Canceled]**
3. **[Canceled]**
4. **[Canceled]**
5. **[Canceled]**

6. **[Previously Presented]** The apparatus of claim 80, wherein said one or more paddle assemblies comprise a series of like paddle members.

7. **[Previously Presented]** The apparatus of claim 80, wherein said one or more paddle assemblies is disposed upon a drum and said drum is mounted upon a feeder shaft.

8. **[Previously Presented]** The apparatus of claim 80, wherein said one or more paddle assemblies is mounted to an endless chain configured to be driven along an endless path about one or more powered rollers, said endless path comprising one or more either straight or curved segments, and said endless path coinciding with said feeder path at least during said flow through said array of blades.

9. **[Previously Presented]** The apparatus of claim 80, wherein each of said one or more paddle assemblies comprises:

a scoop portion shaped to cradle said wood chips; and

a fence portion shaped to contain said wood chips during said flow through said array of blades.

10. **[Previously Presented]** The apparatus of claim 80, wherein said wood chips comprise generally oblong chips and wherein said one or more paddle assemblies is shaped to align said oblong chips generally transverse to said array of blades in preparation for said flow through said saw assembly.

11. **[Previously Presented]** The apparatus of claim 9, wherein said saw assembly generates a wind, and wherein said fence portion is further shaped to contain said wood chips in opposition generally to said wind.

12. **[Previously Presented]** The apparatus of claim 80, wherein said topper assembly comprises:

one or more topper blades disposed upon a shaft and configured to be driven at a topping speed in said first rotational direction.

13. **[Previously Presented]** The apparatus of claim 80, further comprising a conveyor assembly providing an incoming flow of said wood chips.

14. **[Previously Presented]** The apparatus of claim 80, further comprising:

a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly,

said chute comprising a floor and a lower chute edge.

15. **[Original]** The apparatus of claim 14, wherein said chute further comprises:

a chute actuator configured to move said chute relative to said feeder assembly between said engaged position and a disengaged position, said disengaged position characterized by said chute guiding said wood chips away from said feeder assembly; and

a chute controller operably connected to said chute actuator.

16. **[Original]** The apparatus of claim 15, wherein said chute further comprises:

a chute load sensor positioned along said chute near said flow of wood chips;

said chute load sensor operably connected to said chute controller, said chute load sensor capable of transmitting at least a normal signal and a fault signal.

17. **[Original]** The apparatus of claim 16, wherein said chute load sensor comprises a metal detector, and said fault signal indicates a metal object in said flow of wood chips.

18. **[Original]** The apparatus of claim 15, wherein said chute actuator in response to a fault signal moves said chute into said disengaged position.

19. **[Previously Presented]** The apparatus of claim 80, further comprising:

a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, said chute comprising a floor and a lower chute edge; and

a dam positioned between said chute and said feeder assembly, said dam shaped to urge said wood chips toward said feeder assembly.

20. **[Original]** The apparatus of claim 19, wherein said dam comprises:

an inner face oriented toward said feeder assembly, said inner face shaped to nearly coincide with said feeder zone;

a trailing dam edge; and

a leading dam edge.

21. **[Original]** The apparatus of claim 20, wherein said dam is stationary relative to said feeder assembly and said trailing dam edge nearly meets said lower chute edge when said chute is in said engaged position.

22. **[Original]** The apparatus of claim 20, wherein said one or more paddle assemblies further comprises an outer paddle face and a leading paddle edge, and wherein said dam is positioned such that:

(a) said outer paddle face nearly meets said inner dam face; and

(b) said leading paddle edge nearly meets said leading dam edge.

23. **[Previously Presented]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed in spaced-apart relation upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along a feeder path, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades, wherein said saw assembly is positioned such that said shaft interference zone nearly intersects tangentially with said feeder zone;

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone, said topper assembly defining a topper zone, said topper assembly positioned such that said topper zone nearly intersects tangentially with said feeder zone; and

a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, said chute comprising a floor and a lower chute edge,

wherein said feeder assembly comprises one or more paddle assemblies configured to be driven along said feeder path at a feeder speed in a direction generally opposing said first rotational direction, each of said one or more paddle assemblies defining an array of slots therethrough, positioned to accept insertion of said array of blades,

said apparatus reducing said wood chips into a plurality of cut chips.

24. **[Canceled]**

25. **[Previously Presented]** The apparatus of claim 23, wherein said one or more paddle assemblies comprise a series of like paddle members.

26. **[Previously Presented]** The apparatus of claim 23, wherein said one or more paddle assemblies is mounted to an endless chain configured to be driven along an endless path about one or more powered rollers, said endless path comprising one or more either straight or curved segments, and said endless path coinciding with said feeder path at least during said flow through said array of blades.

27. **[Previously Presented]** The apparatus of claim 23, wherein each of said one or more paddle assemblies comprises:

a scoop portion shaped to cradle said wood chips; and

a fence portion shaped to contain said wood chips during said flow through said array of blades.

28. **[Previously Presented]** The apparatus of claim 23, wherein said wood chips comprise generally oblong chips and wherein said one or more paddle assemblies is shaped to align said oblong chips generally transverse to said array of blades in preparation for said flow through said saw assembly.

29. **[Previously Presented]** The apparatus of claim 27, wherein said saw assembly generates a wind, and wherein said fence is further shaped to contain said wood chips in opposition generally to said wind.

30. **[Previously Presented]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed in spaced-apart relation upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along a feeder path, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades, wherein said saw assembly is positioned such that said shaft interference zone nearly intersects tangentially with said feeder zone;

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone, said topper assembly defining a topper zone, said topper assembly positioned such that said topper zone nearly intersects tangentially with said feeder zone; and

a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, said chute comprising a floor and a lower chute edge,

wherein said topper assembly comprises one or more topper blades disposed upon a shaft and configured to be driven at a topping speed in said first rotational direction,

said apparatus reducing said wood chips into a plurality of cut chips.

31. **[Original]** The apparatus of claim 23, further comprising a conveyor assembly providing an incoming flow of said wood chips.

32. **[Previously Presented]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed in spaced-apart relation upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along a feeder path, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades, wherein said saw assembly is positioned such that said shaft interference zone nearly intersects tangentially with said feeder zone;

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone, said topper assembly defining a topper zone, said topper assembly positioned such that said topper zone nearly intersects tangentially with said feeder zone; and

a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, wherein said chute comprises:

a floor;

a lower chute edge;

a chute actuator configured to move said chute relative to said feeder assembly between said engaged position and a disengaged position, said disengaged position characterized by said chute guiding said wood chips away from said feeder assembly;

a chute controller operably connected to said chute actuator; and

a chute load sensor positioned along said chute near said flow of wood chips, said chute load sensor operably connected to said chute controller, said chute load sensor capable of transmitting at least a normal signal and a fault signal,

said apparatus reducing said wood chips into a plurality of cut chips.

33. **[Original]** The apparatus of claim 32, wherein said chute load sensor comprises a metal detector, and said fault signal indicates a metal object in said flow of wood chips.

34. **[Original]** The apparatus of claim 32, wherein said chute actuator in response to a fault signal moves said chute into said disengaged position.

35. **[Original]** The apparatus of claim 23, further comprising:

a dam positioned between said chute and said feeder assembly, said dam shaped to urge said wood chips toward said feeder assembly, said dam comprising:

an inner face oriented toward said feeder assembly, said inner face shaped to nearly coincide with said feeder zone;

a trailing dam edge; and

a leading dam edge.

36. **[Original]** The apparatus of claim 35, wherein said dam is stationary relative to said feeder assembly and said trailing dam edge nearly meets said lower chute edge when said chute is in said engaged position.

37. **[Original]** The apparatus of claim 35, wherein said one or more paddle assemblies further comprises an outer paddle face and a leading paddle edge, and wherein said dam is positioned such that:

(a) said outer paddle face nearly meets said inner dam face; and

(b) said leading paddle edge nearly meets said leading dam edge.

38 – 51. **[Canceled].**

52. **[Withdrawn]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed in spaced-apart relation upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along an endless feeder path, said endless feeder path comprising one or more either straight or curved segments, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades;

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone, said topper assembly defining a topper zone;

said apparatus reducing said wood chips into a plurality of cut chips.

53. **[Withdrawn]** The apparatus of claim 52, wherein said saw assembly is positioned such that said shaft interference zone nearly intersects tangentially with said feeder zone.

54. **[Withdrawn]** The apparatus of claim 52, wherein said topper assembly is positioned such that said topper zone nearly intersects tangentially with said feeder zone.

55. **[Withdrawn]** The apparatus of claim 52, wherein said saw assembly further comprises an array of spacers disposed upon said shaft, said spacers positioned alternately between said array of blades.

56. **[Withdrawn]** The apparatus of claim 52, wherein said feeder assembly comprises one or more paddle assemblies configured to be driven along said feeder path at a feeder speed in a direction generally opposing said first rotational direction,

each of said one or more paddle assemblies defining an array of slots therethrough, positioned to accept insertion of said array of blades.

57. **[Withdrawn]** The apparatus of claim 56, wherein said one or more paddle assemblies comprise a series of like paddle members.

58. **[Withdrawn]** The apparatus of claim 56, wherein each of said one or more paddle assemblies comprises:

a scoop portion shaped to cradle said wood chips; and

a fence portion shaped to contain said wood chips during said flow through said array of blades.

59. **[Withdrawn]** The apparatus of claim 56, wherein said wood chips comprise generally oblong chips and wherein said one or more paddle assemblies is shaped to align said oblong chips generally transverse to said array of blades in preparation for said flow through said saw assembly.

60. **[Withdrawn]** The apparatus of claim 56, wherein said saw assembly generates a wind, and wherein said fence is further shaped to contain said wood chips in opposition generally to said wind.

61. **[Withdrawn]** The apparatus of claim 52, wherein said topper assembly comprises:

one or more topper blades disposed upon a shaft and configured to be driven at a topping speed in said first rotational direction.

62. **[Withdrawn]** The apparatus of claim 52, further comprising a conveyor assembly providing an incoming flow of said wood chips.

63. **[Withdrawn]** A control system for a wood chip reducing apparatus, said apparatus having a saw assembly configured to be driven in a first rotational direction under a normal operating condition, a feeder assembly configured to be driven in a direction generally opposing said first rotational direction under a normal operating condition, a topper assembly configured to be driven in a direction generally opposing said first rotational direction under a normal operating condition, a chute disposed in an engaged position to guide a flow of wood chips toward said feeder assembly, and a chute actuator configured to move said chute relative to said feeder assembly between said engaged position and a disengaged position, said system comprising:

a saw load sensor operably connected to said saw assembly and configured to sense a saw load;

a feeder load sensor operably connected to said feeder assembly and configured to sense a feeder load;

a topper load sensor operably connected to said topper assembly and configured to sense a topper load;

a chute load sensor operably connected to said chute and configured to sense a chute load; and

a master controller operably connected to each of said respective sensors, each of said respective sensors capable of transmitting at least a normal signal and a fault signal.

64. **[Withdrawn]** The control system of claim 63, wherein said master controller, in response to a fault signal from any of said respective sensors received at a start time:

directs said chute actuator to move said chute into said disengaged position, said disengaged position characterized by said chute guiding said wood chips away from said feeder assembly; and

directs said feeder assembly to drive said feeder assembly in said first rotational direction.

65. **[Withdrawn]** The control system of claim 64, wherein said master controller, in response to a normal signal from each of said respective sensors received at an end time following said start time:

directs said chute actuator to move said chute into said engaged position; and

directs said feeder assembly to drive said feeder assembly in a direction generally opposing said first rotational direction.

66. **[Withdrawn]** The control system of claim 63, wherein said master controller, in response to a fault signal from any of said respective sensors received at a first time:

directs said feeder assembly to pause said feeder assembly;

directs said saw assembly to pause said saw assembly; and

directs said topper assembly to pause said topper assembly.

67. **[Withdrawn]** The control system of claim 66, wherein said master controller, in response to a normal signal from each of said respective sensors received at a second time following said first time, directs said feeder assembly, saw assembly, and topper assembly, respectively, to return to said normal operating condition.

68. **[Canceled]**

69. **[Canceled]**

70. **[Canceled]**

71. **[Previously Presented]** The method of claim 86, further comprising:

mounting said one or more paddle assemblies to an endless chain configured to be driven along an endless path about one or more powered rollers, said endless path comprising one or more either straight or curved segments, and said endless path coinciding with said feeder path at least during said flow through said array of blades.

72. **[Previously Presented]** The method of claim 86, further comprising:

shaping said one or more paddle assemblies to align said wood chips generally transverse to said array of blades in preparation for said flow through said saw assembly;

providing a scoop portion shaped to cradle said wood chips substantially within each of said one or more paddle assemblies; and

providing a fence portion shaped to contain said wood chips substantially within each of said one or more paddle assemblies during said flow through said array of blades.

73. **[Previously Presented]** The method of claim 86, further comprising:

equipping said topper assembly with one or more topper blades disposed upon a shaft and configured to be driven at a topping speed in said first rotational direction.

74. **[Previously Presented]** The method of claim 86, further comprising:

providing a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, said chute comprising a floor and a lower chute edge.

75. **[Original]** The method of claim 74, further comprising:

providing a chute actuator configured to move said chute relative to said feeder assembly between said engaged position and a disengaged position, said disengaged position characterized by said chute guiding said wood chips away from said feeder assembly;

operably connecting a chute controller to said chute actuator;

locating a chute load sensor along said chute near said flow of wood chips, said chute load sensor capable of transmitting at least a normal signal and a fault signal; and

operably connecting said chute load sensor to said chute controller.

76. **[Canceled].**

77. **[Previously Presented]** The method of claim 86, further comprising:

positioning a dam between said chute and said feeder assembly, said dam shaped to urge said wood chips toward said feeder assembly; and

shaping said dam to include an inner face oriented toward said feeder assembly, said inner face shaped to nearly coincide with said feeder zone, a trailing dam edge, and a leading dam edge.

78. **[Original]** The method of claim 77, further comprising:

mounting said dam in a stationary location relative to said feeder assembly;

positioning said dam such that said trailing dam edge nearly meets said lower chute edge when said chute is in said engaged position.

79. **[Original]** The method of claim 77, wherein said one or more paddle assemblies comprises an outer paddle face and a leading paddle edge, said method further comprising:

positioning said dam such that said outer paddle face nearly meets said inner dam face; and

positioning said dam such that said leading paddle edge nearly meets said leading dam edge.

80. **[Previously Presented]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along a feeder path, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades; and

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone;

wherein said feeder assembly comprises one or more paddle assemblies configured to be driven along said feeder path at a feeder speed in a direction generally opposing said first rotational direction, each of said one or more paddle assemblies defining an array of slots therethrough, positioned to accept insertion of said array of blades,

said apparatus reducing said wood chips into a plurality of cut chips.

81. **[Previously Presented]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along a feeder path, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades; and

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone;

wherein said topper assembly comprises one or more topper blades disposed upon a shaft and configured to be driven at a topping speed in said first rotational direction,

said apparatus reducing said wood chips into a plurality of cut chips.

82. **[Previously Presented]** An apparatus for reducing the size of wood chips, comprising:

a saw assembly having an array of blades disposed upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

a feeder assembly configured to direct a flow of said wood chips along a feeder path, said feeder path passing into and through said array of blades, said feeder assembly defining a feeder zone at least partially intersecting said array of blades;

a topper assembly positioned proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone; and

a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, said chute comprising a floor, a lower chute edge, a chute actuator, and a chute controller operably connected to said chute actuator,

said chute actuator configured to move said chute relative to said feeder assembly between said engaged position and a disengaged position, said disengaged position characterized by said chute guiding said wood chips away from said feeder assembly;

said apparatus reducing said wood chips into a plurality of cut chips.

83. **[Previously Presented]** The apparatus of claim 82, wherein said chute actuator in response to a fault signal moves said chute into said disengaged position.

84. **[Previously Presented]** The apparatus of claim 82, wherein said chute further comprises:

a chute load sensor positioned along said chute near said flow of wood chips;

said chute load sensor operably connected to said chute controller, said chute load sensor capable of transmitting at least a normal signal and a fault signal.

85. **[Previously Presented]** The apparatus of claim 84, wherein said chute load sensor comprises a metal detector, and said fault signal indicates a metal object in said flow of wood chips.

86. **[Previously Presented]** A method of reducing the size of wood chips, comprising:

directing a flow of said wood chips along a feeder path, said feeder path passing into and through a saw assembly, said saw assembly having an array of blades disposed upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

providing a feeder assembly configured to direct said flow of said wood chips along said feeder path, said feeder assembly defining a feeder zone at least partially intersection said array of blades;

positioning a topper assembly proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone, said topper assembly defining a topper zone;

equipping said feeder assembly with one or more paddle assemblies configured to be driven along said feeder path at a feeder speed in a direction generally opposing said first rotational direction, each of said one or more paddle assemblies defining an array of slots therethrough; and

positioning said slots to accept insertion of said array of blades.

87. **[Previously Presented]** The method of claim 86, further comprising:

positioning said saw assembly such that said shaft interference zone nearly intersects tangentially with said feeder zone.

88. **[Previously Presented]** The method of claim 86, further comprising:

positioning said topper assembly such that said topper zone nearly intersects tangentially with said feeder zone.

89. **[Previously Presented]** A method of reducing the size of wood chips, comprising:

directing a flow of said wood chips along a feeder path, said feeder path passing into and through a saw assembly, said saw assembly having an array of blades disposed upon a shaft and configured to be driven at a cutting speed in a first rotational direction, said shaft defining a shaft interference zone;

providing a feeder assembly configured to direct said flow of said wood chips along said feeder path, said feeder assembly defining a feeder zone at least partially intersection said array of blades;

positioning a topper assembly proximate said feeder path, said topper assembly located upstream of said saw assembly relative to said feeder path, said topper assembly configured to reduce the height of said flow of said wood chips such that said flow of wood chips does not tend to extend into said shaft interference zone, said topper assembly defining a topper zone; and

equipping said topper assembly with one or more topper blades disposed upon a shaft and configured to be driven at a topping speed in said first rotational direction.

90. **[Previously Presented]** The method of claim 89, further comprising:

providing a chute disposed in an engaged position to guide said flow of said wood chips toward said feeder assembly, said chute comprising a floor and a lower chute edge.

91. **[Previously Presented]** The method of claim 90, further comprising:

providing a chute actuator configured to move said chute relative to said feeder assembly between said engaged position and a disengaged position, said disengaged position characterized by said chute guiding said wood chips away from said feeder assembly;

operably connecting a chute controller to said chute actuator;

locating a chute load sensor along said chute near said flow of wood chips, said chute load sensor capable of transmitting at least a normal signal and a fault signal; and

operably connecting said chute load sensor to said chute controller.

92. **[Previously Presented]** The method of claim 91, further comprising:

providing a metal detector to act as said chute load sensor, such that said fault signal indicates a metal object in said flow of wood chips.